MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, and Domestic and Rural Affairs.

NEW Perfect Agriculture is the foundation of all Trade and Industry.—Liebig. SERIES.

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In the Country.

In an excursion made about the middle of last month through Oakland County, the condition of the crops in that fertile old county, especially the wheat crop, became subjects of attention. Within a few weeks previous, wheat had greatly improved. Fields that had been despaired of, or considered as likely to be scarcely worth cutting, would, according to appearances at the time of our observation, yield from five to eight bushels per acre. The stand was thin, and in scattered parts of almost every field, would not pay for harvesting: but the heads were long and heavy, the berry in the process of filling in the plumpest manner, so that the fine quality of the incoming crop may be expected to make some amends for its deficient quantity. On the 14th we first noticed the harvest begun on some early sown fields of a sandy soil, though we had passed other fields sufficiently advanced for cutting according to what we consider the best time. The dry weather which, with the exception of occasional scanty showers, had prevailed for four or five weeks, and had aided in maturing and perfecting the crop, was interrupted on the 16th by a copious warm rain, which, we presume, extended to a distance in the interior. This, followed by hot weather, must have set the sap of such wheat plants as were not nearly ripened, into vigorous motion, and we fear the effect on late pieces may have been the production of rust.*

With regard to the product in the district which fell under our observation, it was estimated by most persons as likely to average nearly half a crop. This standard of measurement, *a crop*, is a very common one, but at the same time quite indefinite. *A full crop* would be very variously rated by different farmers, each one estimating a good deal according to his own average production in favorable seasons. A crop of wheat with one farmer is 25 bushels per acre; with another in the same neighborhood, it is half that quantity. The standard varies, too, in different sections of the country—a crop of 30 bushels being as often obtained in one locality, as 15 in another. If by a full crop we mean what the soil of Oakland County is capable of producing in favorable seasons, and does produce in the hands of her best farmers, then we say the present is not more than one-fourth of a crop:—but if we mean the actual average production of the County, in good years, with the usual management, the estimate of nearly half a crop is probably not far from the mark. In traversing the entire breadth of the County, we question if we saw a field which would yield 20 bushels to the acre, and not more than a dozen that would give 15; while we passed very many which would yield from three to six. We heard, however, of single fields, and also of districts of limited extent where the crop was uninjured, which promised a very heavy harvest. This was especially the case in the North tier of towns, and as we understood, generally in the North-Eastern Counties of the State. Such is also the case in the central counties of Shiawassee and Clinton, the lower part of the Grand River valley, and nearly the entire western half of the Peninsula. Some portions of St. Joseph County, we learn have suffered from the fly.

In regard to other crops, we observed that corn, which was extensively planted, having in many instances superseded the ruined wheat, looked well, but was late. On the 15th ult. we saw few pieces which had begun to show the tassel. With a favorable fall, the product of this grain must be much beyond the average. We were struck with a number of instances, in proof of the power of right management of the crop in overcoming the effect of a backward season.—Those who had their ground in good condition at planting, *and especially who cultivated early afterwards*, have no reason to complain that nature did not do her part in pushing the crop toward maturity. Those who deferred the first hoeing until the crop should have been ready for the second, find the season very backward. Soils alike in natural fertility, and planted at the same time, showed from this cause a difference of one half in the size of the corn. This is but one

* We have since heard of no injury from the cause mentioned.

example of that great curse of Western farming, attempting to cultivate more land than can be cultivated well.

We noticed in numerous cases where corn had received its last dressing, the plow had made deep furrows quite near the rows, throwing the earth against the corn so as to form a narrow ridge, and if the plow had passed at right angles, a cone of earth was formed around each hill.—Two bad consequences cannot fail to follow this practice:—The earth, thus heaped around, prevents the summer rains from penetrating to the hills, and the furrows impede the progress of the roots in their efforts to extend and seek nourishment at a distance from the stalk. Cultivators who manage thus appear to think that the roots of corn require but very little space:—but if they will take the pains to trace them carefully when the grain is nearly ripe, in a well pulverized soil where no impediment is offered, they will find that the roots extend horizontally several feet. Where the plow is used as the instrument of culture, the approved rule is that the first plowing throw the earth *from* the hills, the next plowing, splitting the ridge thus formed, throwing the earth *towards* the hills, the plow going both ways in the same furrow, and penetrating but little below the common surface of the ground. In following with the hoe, care is to be used to hill up but little. The hilling process is unnecessary, as corn has a way of sustaining itself without being bolstered.

A farmer informed us of an experiment he tried the present season in steeping seed corn.—Some was steeped in a solution of saltpetre and some in sulphate of soda: the latter exhibited a greener leaf, and had a more rapid growth.

Spring wheat, oats and other spring crops have been injured by drouth, and the yield will not be heavy. It is of little use to raise spring wheat unless the sowing can be done very early. We suggest for this crop, plowing in the fall, sowing and dragging in as soon as the ground is dry enough in the spring. If the soil is poor, top dress lightly with manure in the fall after plowing.

Grass is, in general, rather light from the cause last mentioned. We witnessed the result of an experiment which demonstrated very clearly the great advantage of the use of plaster for grass, on the soil of the oak openings. A farmer had sown a part of his meadow with plaster at the rate of half a bushel to the acre, early in the spring. Finding this part did well, while the rest was suffering from drouth, he sowed some more about a month before we saw it, at the same rate per acre. A small piece was left without any application. The result was, that the part sown with plaster in the spring was a very heavy growth, so much so as to lodge, and would yield over two tons to the acre;—that on which plaster was applied later, promised a yield of nearly one and a half tons, and the remainder of the field where no plaster had been sown, about three fourths of a ton per acre. The farmer assured us that each barrel of plaster sown had been $20 advantage to him in the increased product of pay. He thought half a bushel to the acre enough when applied every year.

The crop of fruit will be moderate, but general. We noticed the Curculio as far west as Pontiac and Waterford. Cultivators of fruit should be on the watch, and examine the plums, nectarines, &c., which fall. If they find on the surface a small semicircular cut, and within, a white worm, at the largest about three eighths of an inch in length, it is probable the enemy is on them, and that the worm is the larva of the curculio.

From Thomas' Fruit Culturist.

Cultivation of the soil for Fruit Trees.

The importance of good transplanting has been already noticed; yet very few practice it as it should be done.

There is another department in the care of fruit trees, still less known and appreciated, and still more important; perhaps not so much so in itself as from its almost universal neglect, and the consequent disastrous results. This is thorough cultivation of the soil. For, of many hundreds of trees which the writer has seen transplanted by various cultivators, more *have been lost from* NEGLECTED AFTER-CULTURE, *than from all other causes put together.*

Persons who purchase young trees treat them variously, as follows:

1. Some kill them at once by drying them in the sun or wind, or freezing them in the cold.

2. Others kill them by crowding the roots into small holes in hard ground, where they can never flourish, and rarely live.

3. Others set them out well, but that is all.—This done, they consider the whole work as finished. The trees are suffered to become choked with grass, weeds, or crops of grain—some live and linger, others die under the hardship; or else are broken off by cattle, or broken down by the team which cultivates the ground.

An intelligent friend purchased fifty very fine

peach trees, handsomely rooted, and of vigorous growth; they were well set out in a field containing a fine crop of heavy clover and timothy.—The following summer was very dry; a luxuriant growth of meadow grass nearly obscured them from sight. What was the consequence? Most of them necessarily perished.

Another person bought sixty, of worse quality in growth; he set them out well, and kept them well cultivated with potatoes. He lost but one tree; and continuing to cultivate them with low hoed crops, they now promise to afford loads of rich peaches, before the dead stubs of his neighbor, just mentioned, have disappeared from his grounds.

Another neighbor a year ago bought fifty good trees. Passing his house late in summer, he said to me, "I thought a crop of wheat one of the best for young peach trees?"—"Just the reverse; it is one of the worst—all sown crops are injurious, all low hoed ones beneficial." "Well," answered he, "I have found it so—my fifty trees all lived it is true, but I have lost one year of their growth by my want of knowledge." His trees were examined; they were in an excellent soil, and had been well set out. All the rows but one had stood in a field of wheat; that one was hoed with a crop of potatoes. The result was striking. Of the trees that stood among the wheat, some had made shoots the same year, an inch long, some two inches, and a very few, five or six inches. While on the other hand, on nearly every one that grew with the potatoes, new shoots a foot and a half could be found, and on some the growth had been two feet, two and a half, and three feet. Other cases have furnished nearly as decisive contrasts.

An eminent cultivator of fine fruit, whose trees have borne for many years, says in a late letter, "My fruit garden would be worth twice as much as it is, if the trees had been planted in thick rows two rods apart, so that I could have cultivated them with the plough. Unless fruit grows on thrifty trees, we can form no proper judgment of it. Some that we have cultivated this season, after a long neglect, seem like *new kinds*, and the flavor is in proportion to the size. Bearing trees often stand in thick grass, and poor crops and poor fruit are the usual result; and the nurseryman who sold them is not unfrequently pronounced a rogue for thus distributing worthless kinds, when good cultivation would wholly change their character.

Trees are frequently mutilated in cultivating the ground with a team; to obviate this difficulty, arrange the horses when they work near the line of trees, one before the other, *ad tandem;* let a boy ride the forward one, use long traces, and a short whipple-tree, and place the whole in the charge of a careful man who knows that one tree is worth more than fifty hills of corn or potatoes, and no danger need be feared.

When it becomes necessary for trees to stand in grass, as in some instances near dwellings, a circle of several feet round each tree, must be kept mellow by the spade. The work should be shallow near the tree to prevent injury to the roots, and gradually deepen as it recedes. This operation when repeated several times during summer, has been known to increase the growth five fold. But a not less important result is the exclusion of the mice, for which this is by far the most effectual method, if the surface is raised nine or ten inches round the tree just before winter. The grass no longer affords these animals any hiding place; and the embankment round the stem prevents the collection of deep snow. It proves completely effectual.

Among the crops which are best suited to young trees, are potatoes, ruta bagas, beets, carrots, beans, and all low hoed crops. Corn, though a hoed crop, is of too tall a growth, shading young trees too much by its formidable stalks.—All sown crops are to be avoided, and grass is still worse. Meadows are ruinous. An acquaintance who purchased a hundred peach trees, and placed them in meadow land, lost most of them, by the overgrowth of the grass; and the following winter the mice, who avoid clean culture, destroyed the remainder. Every one was lost.—A clean, mellow, cultivated piece of ground, kept so a few years, might have saved the whole of them, and brought them soon into bearing.

From Morrell's American Shepherd.

In-and-in Breeding.

No point connected with breeding has elicited so much controversy, and much of it certainly of a random character, as the one we are about to consider. There are grounds, to a certain extent, both for an affirmative and negative of the question; and therefore, the writer, with due deference to divided opinion, will present some of the views and arguments entertained and advanced on either side, which will enable the reader to draw his own conclusions from the premises.

By breeding *in and in* is properly meant choosing individuals to breed from of the same family between which exist propinquity or relationship of blood. The objects sought to be accomplished by breeding *in and in*, are to strenghen good qualities and get rid of bad ones as soon as possible; it is therefore very evident that it requires a master's skill in selection of individuals, for if any possess imperfections, these, however slight at first, become hereditary, and will go on assuming a worse and worse type till the breed becomes worthless. Mr. Cully, the eminent sheep breeder, entertained the opinion, that less risk was run by breeding in and in than is generally supposed; yet at the same time was slyly procuring his rams from Mr. Bakewell, and selling his own at high prices to others.

Blacklock contends that breeding in and in is as "destructive to a flock, as marriages of near

relations to the human kind. We would not witness an every-day entailment of diseases, if people would forego their unnatural love of money, and cease their endeavors to keep it in 'the family,' by forming matrimonial alliances with those who are near of kin. The law of God forbids us to wed those who stand in certain degrees of propinquity; but, if we and our descendants avail ourselves of the limits of this law, and marry on its verge a certain number of times, misery must infallibly be the lot even of the tenth generation; and instead of being fathers of a mighty people, few and full of sorrow will be the days of our children; while in place of retaining in their possession our darling wealth, it will, ere long, pass into the hand of the stranger."

In 1800, Mr. Ezra L'Hommedieu, Vice-President of the New York State Agricultural Society, collected very many observations and facts on the breeding of sheep, which went to show the degenerating tendency of breeding in and in. Mr. Dick, of Edinburgh, states, on information given him by many intelligent farmers, that cattle bred in and in are subject to *clyers* in the throat after they have attained their first year. Blacklock says—"Clyers are enlarged lymphatic glands, which are a sure sign of what is termed a scrofulous habit, and a breaking up of the constitution."

Mr. Dickson asserts the following, which will be found in the Quarterly Journal of Agriculture, of Edinburgh:—"The evil of breeding *in and in*, or, in other words, producing too great refinement in tone, is manifested in the first place by a tenderness of constitution; the animals not being able to withstand the extremes of heat and cold, rain and drought. If the evil is prolonged through several generations, the forms of the animals become affected, the bone becomes very small, the neck droops, the skin of the head becomes tight and scantily covered with hair, the expression of the eye indicates extreme sensibility, *the hair on the body becomes thin and short*, and the skin as thin as paper; the *points* continue good, and predisposition to fatness increases, but the whole carcase becomes much diminished in size, though retaining its plumpness and beautiful symmetry. The evil, however does not terminate in the production of these symptoms. Internal diseases ensue, such as disorganization of the liver, or rot, polypi in the trachea, clyers, and malformation of the neck and legs." A writer observes—"It is from this cause that almost every Royal family contains a large proportion of idiots, or, at the best, persons of very weak intellect; and such will continue to occur till legislators fall on some plan of striking at the groundwork of the mischief. If the laws of God and man define to us so clearly the evils of intermarrying with relatives,—and if, as all animals are constructed on one grand plan, we admit the proximity of the sheep to the human race, it follows, that what is destructive in this respect to the one, is destructive to the other, and that we should seek, by a nearly similar, if not wider range of rules, to obviate many of those diseases, of which, when under our protection, they are so frequently the subjects."

It is, in general, to this vile system of breeding that, quite as much as the miserable general management to which American flocks have been subjected, we see so many worthless specimens of sheep, both in form and fleece, throughout the length and breadth of the land. It has been the practice of thousands of sheep-farmers to confine themselves to a single tup in their flocks until age, perhaps, had nearly destroyed his procreative powers, putting him to his own progeny for successive years, which resulted in causing disease and premature death, which, however, was often ignorantly and unjustly attributed to imbecility of constitution of the breed: hence in numerous instances the violent prejudices engendered towards the Saxon race. Farmers in general of the North, from the vicissitudes of the climate, if for no other reason, must avoid the system of breeding in question, as they would a reptile.—None need imagine for a moment that their sheep are so perfect in all respects, but others either far or near may be found among which can be obtained individuals fully equal if not superior to their own. At all events, the effort should be made to find them, rather than incur the risk of ultimately making worthless those in their possession. Every flock-master should beware of entering any flock to purchase from, if he knows that its proprietor has pursued for any length of time the breeding in and in system, and especially if the flock is small, and the range therefore has been limited for selection.

The evils incident to breeding in and in have long since been discovered in England, and also among the celebrated German Saxon wool-growers, and consequently a system has been adopted of breeding from different families of the same race. This unquestionably is the best course, where the flocks are about perfect, as the males interchanged have shades of difference impressed by soil, herbage, and treatment, and the defects of each family have a good chance to be counteracted by the perfections of the other.—By this means the bad points are gradually lessened, and of course are succeeded by other valuable properties.

Crossing.—The next system adopted in breeding, is crossing an inferior race by another possessing properties desirable to acquire. This, it will at once be conceded, is the most proper course for us, as it will be the means of most speedily diminishing the imperfections which characterize the forms and fleeces of a large majority of American flocks. Where the contrast is so great as it is between the ordinary sheep of the country and the pure Merino and Saxon, years will be required of patience, steady perseverance, and nice discrimination in selecting

from generation to generation, before the goal of perfection will be reached. Many sheep-farmers imagine that two or three crosses will accomplish their object, whereas nothing scarcely is more absurd to expect. The greater the contrast, or less homogeneousness of the breeds crossed, the greater length of time will be required, and skill necessary to employ. The proper steps to be taken in the process of crossing, the writer will endeavor familiarly to illustrate.

The object sought, we will suppose, is the improvement, for the most part, of the fleece, by changing its character from openness and coarseness to the opposites, fineness and compactness, or improvement in quantity as well as quality. The ewes we will imagine are the more ordinary grades, and the ram of the Merino blood, the good pedigree of which there can be no question, and whose fleece comes fully up to the object of our wishes.

The result of the first cross will exhibit a few, the wool of which about their shoulders approximates that of the sire, while of other parts there will be great discrepancies, and especially so in the region of the rumps and thighs. All will manifest a general improvement over the dams, and a few a marked likeness of form to the sire; taking the whole together, however, the progeny of the first cross will present a queer melange; but they must undergo a rigid examination, and those whose fleeces conform nearest to the rams should be marked and retained, and those farthest from his excellencies, disposed of. The ram may be again put to the same ewes, but a similar result will follow, and selections should be made from the second batch in like manner as from the first. The question now presents itself, what should be done with the ewes of the first cross, which we will suppose old enough to receive the tup? Should they be put to their sire? This is certainly revolting, to say the least of it, and yet if it is done, is part and parcel of the in and in system. If it is permitted, however, there can be little doubt, that *their* progeny will approximate more nearly to the sire than if another ram equal in all respects had been substituted. This will arise from the first cross possessing much, in a general sense, of his nature, or, in the phraseology of breeders, a "strong dash of blood." Notwithstanding this, and however others may differ, the writer would prefer decidedly using a second ram, as, by so doing, he might correct some trifling defect the original one may have possessed, and which, if used, where the affinity is so extremely close, would exhibit itself in a much stronger type in the second progeny.

If the second ram has been used, which we will consider the most proper, it will make a second cross, and the progeny of this will exhibit also a curious variety of fleeces and forms, being neither one thing nor the other; indeed, on the whole, will operate to discourage much the breeder, and he will think his object almost unattainable. Some will be, as those of the first cross, pretty good about the shoulders, the fleeces, however, thin; others will show a dozen, more or less, qualities of wool in their respective fleeces, in short, every thing but being right. But the breeder must not be discouraged. Let another ram be procured of equal excellence with the first and second, and used for the third cross, and to his great delight, among the progeny he will discover a number which begin to resemble quite closely the object for which he is striving. After each successive cross, he should pursue rigidly his course of selection, for his ultimate triumph will depend greatly on his skill and attention in this respect. The progeny of the fourth cross (at least a good majority of them) will come well up to the mark—not quite, however, as, by critical examination, he will discover some coarseness yet about the rump, belly, thighs, &c.; and perhaps the fleeces will not be compact enough; others there will be, although qualities generally good, whose fleeces will be too dry, not being sufficiently imbued with yolk.

Let the breeder pursue an undeviating track in selection, for he will discover individuals even after the seventh and eighth crosses comparatively indifferent, and if his motto is "onward," he will not breed from these. But what, perhaps, will surprise him greatly at this stage, notwithstanding a particular ewe may be almost as perfect in her fleece as either of the rams employed, yet she will bring forth an offspring occasionally, which will represent the defects in a marked degree of some of those of the first and second cross! but were he an "old stager" this would not astonish him, as it is an ordinary occurrence for even ten or fifteen years after the commencement of improvement in instances where the blood on one side was of the ordinary stamp, and which would have been still more frequent, if the rams used had not been *wholly pure*. This is an item showing the great value to be attached to *blood*.

After the seventh or eighth cross, will it be proper to employ any males produced in the flock? As a general rule, no; it is safer to procure them from another family higher bred.—Hitherto it has too frequently been the case that, after a flock has been pushed far on to perfection, the breeder has resorted to his own rams, by which improvement has ceased, arising from the propensity of even high-grade animals to transmit some of the defects of the stock on one side from which they sprang, to their progeny. This rule, however, may sometimes be violated with impunity. For instance, after the third or fourth cross, some of the ewes may produce offspring uniformly alike, and very perfect, and such instances show that they have been very thoroughly infused with the pure blood of their sires; therefore in such cases it may be safe to employ their offspring as tups. But the breeder should

be very sure of the circumstance stated, which can only be arrived at with certainty by attention in marking the lambs for several successive years.

In breeding for the fleece, other points must not be neglected, such as form, and indications of sound constitution. The remarks which have appeared in reference to breeding the mutton sheep will apply in some measure to Merinos and Saxons. Small bone, and a compact square frame, but not too large, are always good points in any breed, and should never be lost sight of. It should be considered that, after we have shorn the fleece, the drovers have a right to step in to judge of the carcase, and they have a curious way of "coming over us," if our sheep are too small and slabsided.

From Jonas Doolittle to the subscribers of the Michigan Farmer.

You are many of you first rate honest, clever fellows, who pay promptly for your paper, and thus enable the publishers to sustain and improve it. Were it not for you, the well meaning rascals who subscribe for it and forget to pay, would drag it to an untimely grave. But non-paying subscribers and rats are not the only vermin that live upon the earnings of others. There is another class that, if possible, are worse than either. They neither subscribe nor pay, and what is worse, by borrowing and never returning, they discourage honest, paying subscribers from taking the paper. But hold on, my good friend; dont be too rash. Lend it to him a spell longer: perhaps it may do him good. His mind may become expanded so that he may see it to be his duty and interest to have a paper of his own. But meantime, in order to protect yourself from loss, just adopt the following plan.

Take hickory, or some other tough wood, and shave out two pieces, each eleven inches long, three-fourths of an inch wide, and one-eighth of an inch thick. Bore four holes through each as follows: bore one two inches from one end and another three inches. Bore two more in the same way near the other end. Get two strings of some kind, about sixteen inches long each, and string them both through one of the sticks in such a way that the ends will all be on one side of the stick. Then get a piece of brown paper, large enough so that when doubled, it will cover one side of the Michigan Farmer: make holes through it near one of the margins corresponding with the holes in the sticks: put the strings through them; then take the April number of the Farmer, lay it flat on the table with the title page towards you, lay one of the sticks on the left hand margin, and with an awl or fork make holes through the paper corresponding with those in the stick. Put the strings through them in such a way that the title page will come next to the brown paper cover. Then string on your May, June, and July numbers in the same way. Finally, put on another piece of brown paper like the first, then your other stick, and tie up your strings in bow knots, and it is ready to lend. It might be well, however, to write a caution on the cover, to have them lay it up out of the children's way when they are not using it; for such folks dont generally train their children so as to know how to use a book. When your August number comes, take off the last cover, string it on, and then put on the cover again as before. At the end of the year you will have a book worth all you have paid for it, postage and all. You can either let your sticks be on and make some more for the next year, or take them off and have it stitched or bound. So farewell.

Jonas Doolittle.

"Wonting" Cattle.

This may appear to be a subject of but little importance; but let those who think so, recollect that in a new country, where the cattle have all been driven from a distance, they are sometimes very troublesome. I have known men spend several days at a time in hunting for them, and think nothing of spending two or three hours one day with another, travelling through the high grass and weeds, and wet from head to foot with the heavy dews of the morning. Now if anything can be done to avoid this trouble, I think it worth spending a little time for.

When cattle are first brought to any place, my plan is not to shut them up, but let them run, and keep watch of them for a while, drive them into the yard occasionally, give them some salt in there, perhaps shut them in a while during the middle of the day, then let them out and give them time to fill themselves, being sure to keep them up over night again. To make their home still more pleasant, let the yard where they are kept be large and on high ground: have troughs to keep salt in, set up from the ground so that the hogs cannot get into them; let this be kept clean from straw or filth of any kind. Plough the ground two or three times during the summer. This will, in a great measure, prevent the flies from being so troublesome, and to make it still more convenient, it will be well to build a shed of bushes or some other material [Suppose we leave a green tree there.—Ed.] in some part of the yard, so that they may have a shade to lie under in the middle of the day. Last, though not least, have a gate so that they will not have to climb over the fence to get there.

Now I think that if such preparations are made, we shall not have to hunt much for our cows—that they will come up every night, and lie in the yard in preference to sleeping in the woods. In support of this opinion, let us recollect that cattle do not lie down in the woods either in the night or during the heat of the day, but resort to some opening: hence I conclude that a

yard prepared as above would be their place of rest in preference to any other.

I cannot say that I have ever followed out this plan in all particulars, never having taken as much pains as is here described; but I have tried it to a less extent, and saved myself much trouble even at that. A. HENRY.

Carlisle, Eaton Co., July 10, 1847.

From the American Agriculturist.

Production and Preparation of Corn for the European Markets.

But my present object is more particularly to call the attention of the readers of the Agriculturist, at points remote from the seaboard, to the propriety of properly preparing their grain for shipment. We are now beginning to receive accounts of heavy losses from the heating of grain after shipment. This damage has, in many cases, exceeded one-half the entire value of the cargo; and although this loss, in the first instance, falls on the shippers, it is pretty sure, in the end, to reach back to the producer. This hazard has become so great, from the excessive tendency to heat in Indian corn, if retaining the slightest moisture when stowed in the vessel, that some of the heaviest dealers in New Orleans have determined to risk no future shipments, without the grain being first fully prepared for it, and this is effectually done by kiln-drying.

Several establishments have been recently erected for this purpose in this city, two of which at least have proved defective in accomplishing the objects satisfactorily. Another is about being put up, of sufficient capacity to kiln-dry five thousand bushels per day. Kilns have already gone into operation in several of the exporting places on the river above, and there is no doubt these will be rapidly multiplied, till sufficient capacity shall have been attained, to prepare effectually every bushel of grain destined to a distant market.

The best plan for this purpose, on an extensive scale, which I have seen in operation, is a new, and apparently valuable improvement for kiln-drying, the invention of George W. Woodington. He is about taking out a patent for it, for himself and Mr. George Gilbert, both of Cincinnati.

The first one ever erected, has just been put into operation. It consists of substantial brick mason-work, about twenty-four feet long, six wide, and eight high, arched with brick. The fire and grate occupy three feet of the centre, at the bottom. Immediately above the fire are iron plates, resting on the walls on either side, extending the whole length. At the other end, the flame and smoke are divided, and pass up through two iron pipes at each corner, and then on either side, and almost in contact with the cylinder, they return the smoke through the kiln, where they pass out.

The cylinder is of strong sheet, light boiler iron, three feet in diameter, and occupies the entire length within the mason-work. On the inside of this, flanges are riveted lengthways and spirally, turning about 170 deg. of the circle, in the whole length of the cylinder. It is placed one foot above the fire in an arch, which is kept at a temperature high enough effectually to dry the corn while passing through, which requires some ten minutes. The corn is fed into one end of the cylinder, by a spout leading from a hopper above, and it is discharged from the other end, and through a short iron conductor. It is capable effectually of drying eight hundred bushels in twenty-four hours, which it accomplishes without burning or cracking any of the kernels. Not one is scorched or discolored, but all have the bright, clear appearance and original taste of the grain, while its germ or vitality is effectually destroyed, thus removing all tendency to change and injury.

I cannot but believe, that all corn destined for remote shipment hereafter, will be kiln-dried.—There is a saving of 9 per cent in freight, in consequence of loss of bulk and weight, in drying—saving of insurance—there is no danger from weevil from any kiln-dried grain; and there is, lastly, the frequent saving of the whole grain, which would otherwise spoil by moisture. I have the above fixtures for sale at my warehouse, 75 Camp st., New Orleans. R. L. ALLEN.

New Orleans, April 20th, 1847.

From the Horticulturist.

Salt for Live Trees and Hedges.

Every one who knows the English Hawthorn, knows how much it suffers in this latitude with the heat of our midsummer sun. Beautiful as it is in early spring, it usually becomes, after the month of July, so brown and dingy, in its foilage, as frequently to present the appearance of a *dead* rather than a *live fence*.

Having a fine line of this hedge on one of the boundaries of our premises, and observing that the borer was commencing his attacks upon portions of it, we applied in April, 1845, a pretty plentiful dressing of salt along the whole line of hedge, and immediately, about the base of the thorn stems. The application was strong enough to kill the young tufts of grass, that were growing here and there among the roots of the hedge. The hedge itself was greatly improved in luxuriance by it. But what most surprised us was this: The spring and summer of 1845 were, perhaps, the dryest and hottest ever known here. Trees and plants of every kind suffered greatly. For the first time, within our remembrance, since the hedge was planted, it maintained its healthy and green verdure, through the whole season till autumn. We attribute this solely to the action of the salt, and cannot but think, therefore, that it must be one of the most valuable alteratives, when the soil is naturally *too dry*, for any tree or

plant, provided the tree and plant to be grown there is one that will bear salt.

A dry soil is one that from its texture has too little capacity for moisture. Common salt has an unusual capacity for attracting it. This is probably one reason why the plum tree, which loves a moist soil, thrives so well after application of salt.

Harrison's Cultivators.

Friend Hurlbut:—I have for some time been thinking of writing a few lines by way of apology to our friend Harrison of Blissfield, who is the inventor and patentee of the shovel pointed cultivator. When I first saw and examined, I pronounced them a Yankee humbug. I thought and said that I would not carry one home, or have it on my farm as a donation. But this season I found myself in want of something different to work in my corn than what I had, (which was one of the expanding cast iron teeth cultivators,) and I concluded to try one of Mr. Harrison's three pointed cultivators, and I find it incomparably the best which I ever saw for working among corn. The ground I have in corn is a piece of new land, and was a thick undergrowth of different kinds of timber, and of course very full of stumps and roots; but it works to a charm; it is so light, and yet strong enough to answer all purposes. The inventor is entitled to all praise for his perseverance, and his name should be enrolled among the modern worthies, as a benefactor to man and beast.

I know not what his number threes are, having never seen one of them; but if I could get one with some points, taking care to preserve the relative position of each point to the other, as is in the three pointed ones, it would be the best article ever used to put in any kind of small grain. If you will allow me a small corner in your paper to say through it thus much to friend Harrison, I shall be gratified, and I hope it will be no damage to him. Leander Sackett.

East-Raisinville, Mon. Co., July 14, '47.

Importance of Deep Tillage.

However skilfully and philosophically we may carry on our saving and application of manures; however well we may select our seed, and choose our seed-time, without deep tillage we can by no means receive the maximum result. Drained land deeply stirred, and thoroughly pulverized, becomes a kind of regulator of the weather for itself; it is not soon soaked in wet, and it forms a storehouse of moisture in dry weather. It is a bad conductor of heat, and is therefore not easily over heated; but on the other hand it is not soon cooled, and so keeps up an equal temperature by night and by day, in cloud and in sunshine—in the highest degree favorable to the healthy developement of plants.—*Farmer's Herald.*

[To this may be added the fact that during summer, the occasional rains of that season, not commonly very copious, penetrate but little in an unstirred soil, but in one well pulverized, they sink down and are absorbed as in a sponge, whereby they are retained for the use of plants. Thus it is matter of common observation that while lands that remain unplowed till midsummer are hard and dry, those that were plowed early in June are comparatively moist and easily tilled. A rain which penetrates the former but two inches, will moisten the latter at a depth of four or five. A like difference is observable in the rapidity of evaporation from a tilled and untilled surface. While the untilled field will part with its store of moisture in two or three days of sunshine, the other will retain it as many weeks. Hence is demonstrated the necessity of keeping the soil constantly pulverized and loose, for the benefit of growing plants.

In violation of this principle, we have known gardeners abstain from the use of the hoe in times of drouth, for fear of losing what little moisture remained in the soil. It is needless to say, the condition of their vegetables showed the uselessness of such precaution.]

Work for Gardeners.

As the last number of the Farmer contained directions for budding, I will not speak of the modus operandi; but say that it is now time to bud Plums and Cherries. Take the Plums first, bud them near the ground, and you will have straight and handsome trees. Cherries next, see that the buds are from healthy trees of the best varieties. Peach, Apricot and Nectarine may be budded in August and September. Roses should be budded in August.

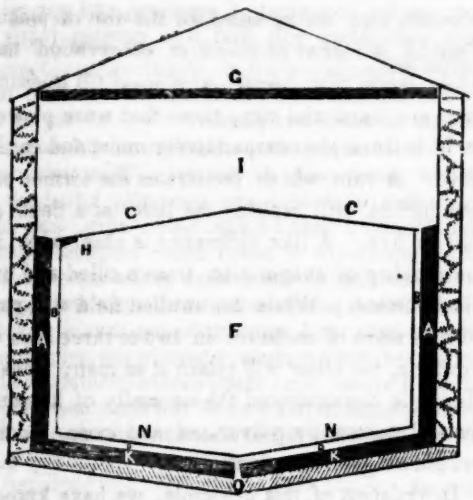
Strawberries should be transplanted in August if the weather is not too dry. Should it be very dry, defer it until a favorable opportunity offers. They should be planted early enough to give the roots a chance to get a good hold of the earth, that the frost may not throw them out.

Look over your grape vines. Where the vines are overloaded with fruit, take off the smallest bunches, also thin out the small berries from the large bunches. By this means, the fruit will be larger and fairer, and the vines will be more productive the next year. Never take off the

leaves to expose the fruit to the sun and storms. You could not invent a better method to prevent its ripening. Tulips, Hyacinth, Narcissus and Crocus bulbs should be taken up and placed away carefully in some dry place until October, in the mean time, dig the beds, and manure with well rotted compost, that the soil may be rich and light.

Propagate fine Pinks and Carnations by layers. J. C. H.

Detroit, 14th July, 1847.



One of the greatest inventions of the Age—Kephart's Patent Fruit and Vegetable Preserver.

The outer columns in the above cut represents walls of stone, enclosing the inner construction.

The light shading at the bottom, descending to the centre, represents the earth.

The dark shadings, A, A, and K, K, represents two boardings, with from six to ten inches space, and this space filled with a substance that will best exclude heat.

F is the Fruit Room, in which articles are to be placed for preservation.

C, C, a floor or cover to the fruit room, made water-tight, with a coat of pitch over its surface to prevent moisture from penetrating.

I, an apartment to be filled with ice supported by the floor, C, C, and designed to contain ice enough, when filled, to last during the whole year.

B, B, and D, D, are spaces around the fruit room, intended for the meltings of the ice on the top floor to pass off. This ice water, as it passes down these spaces around the fruit room, and over the tight floor at bottom, in the space, D, D, serves to absorb any heat which may find its way through the non-conductor, K, K.

O, the outlet for ice water.

H, hatchway or entrance into fruit room.

The fruit room F, is intended to be below ground, and the ice apartment, I, if desired, can be above; buildings above ground being now generally preferred for ice to those below ground.

It will be seen from the construction, that the non-conducting substances, A, A, and K, K, are designed to prevent the admission of heat from the earth, at the sides and bottom, into the fruit room F; while the ice upon the floor, C, C, acts by keeping the fruit room at a constant uniform temperature, dry, and so cold as to exert a preserving influence upon articles placed therein.

The undersigned having purchased the patent right of the above invention for the United States, excepting the States of New Jersey, Delaware, and Maryland, and the cities of New York and St. Louis, invite the attention of the public to an examination of the scientific principles upon which the above invention is based, as well as its practical utility—and offer for sale patent rights for the construction and use of the Preserver by States, cities, counties, towns, or individual rights, upon terms that will induce all interested in the growth or sale of *fruits and vegetables*, or in the *curing* and *preservation* of *meats;* also dealers in *butter, eggs*, &c., to purchase rights and construct *Preservers.*

As will be seen by the above drawing, its success depends entirely upon chemical truths.

The room F, in which fruits, &c., are placed for preservation, will remain the whole year at a constant, uniform temperature, so near the freezing point as to arrest the *rotting* as well as the *ripening* process of fruits, &c., without danger of freezing them. That the fruit room F, will remain at this temperature will be evident from the fact, that the air in contact with the floor C, C, on which the ice rests, becomes nearly as cold as ice itself. This condensed air will immediately sink, while the air at the bottom of the room, if but half a degree warmer, will rise to the floor C, C, and give off its heat; thus maintaining a uniform temperature, corresponding with that in contact with the floor C, C.

Articles placed in this Preserver, remain as perfectly dry and free from moisture, as if kept in the best ventilated apartments. The air descending from the floor C, C, being always about half a degree colder than the boxes or barrels of fruit, &c., cannot deposit any moisture thereon; it being an established fact, that no object can condense moisture, unless colder than the air coming in contact with said object. It is a theory long maintained by Liebig and other eminent chemists, that a temperature, dry, uniform, and near 32 degrees fahrenheit, will arrest the processes of decay which take place in fruits, &c.; but never until the above invention, could the truth of the theory be tested. Two years of experiments have proved the truth of the theory, and established the entire success and utility of the invention; as fruits, &c., foreign and domestic, viz: oranges, lemons, apples, pears, peaches, plums, grapes, &c., as well as the most delicate fruits; also potatoes, green corn, melons, &c.,

can be kept as long as desired: add to these butter, eggs, bacon, &c., which can be kept throughout the whole year, as fresh and sweet as when first placed in the Preserver.

Fruits, &c., in common temperatures undergo saccharine fermentation, or what is known by the mellowing or ripening process, which is followed by the vinous, acetous, and putrefactive fermentations, which complete the rotting process. A temperature so low arrests the first process towards decay, so that fruits, &c., if placed in the Preserver when first plucked from the tree or vine, will retain all their original juices, freshness and flavor.

It will readily be seen, that the only way in which fruits, &c., can be kept during all seasons of the year, is by the plan offered in this invention, and one of its greatest advantages is, that fruits, &c., can be kept in all climates—not only in the North where ice is produced, but in the South, where it has become an article of extensive commerce; being shipped in large cargoes, buildings must be erected for its reception. For this purpose the room I, will be most appropriate—thus affording the double facility of selling ice from the top, and preserving fruits, &c., below.

All desirous of a further knowledge of the operations of the Preserver, can see one by calling upon P. Kephart, Baltimore, who is our authorized agent for the sale of rights—or upon the undersigned, *Coates-street wharf, near Fairmount, Philadelphia.*

Flack, Thompson & Brother.

All communications will receive prompt attention, if addressed either to

Peter Kephart,
Western Hotel, Baltimore.
Or Flack, Thompson & Brother,
Spring Garden Post Office, Phil'a.

June 15th, 1847.

The Horticulturist for June.

I have just risen from a perusal of the June number of the Horticulturist, and have found it filled, as usual, with articles of great practical utility. The first volume of this periodical, of which this number is the last, will not diminish the reputation which Mr. Downing has as a practical horticulturist, or as a writer. His work on "Fruits and Fruit Trees of America" has already passed through several editions, has become, as we predicted, the standard work upon the subject of fruits, and will do much towards correcting the pomological confusion that so extensively prevails, especially in the Western States. The Horticulturist is a work that will assist in correcting the false theories and practice that have been so common in our country, and I cannot but hope that it will find many supporters among the multitude of fruit growers in Michigan.

The first article in the number before me is by the Editor, and contains the description of two beautiful evergreens but little known in this country—the Cedar of Lebanon, and the Chili pine. The former is found to be perfectly hardy, and the latter has been found so in those portions of Europe where the climate is like our own—inference—that it will prove hardy here. The appearance of these two trees is certainly beautiful on paper, and will, we doubt not, ere long beautify and adorn many a lawn in our own country.

The second article is by S. G. Perkins,* of Boston, on the treatment of espaliers, and our amateur cultivators will find it to contain many a useful hint.

The third is by T. S. Humrickhouse, on the vitality of seeds and plants.

The fourth, by Geo. Bartlett on the destruction of peach buds in winter. The writer affirms that peach buds are generally killed when the Mercury falls 14 deg. below zero, and that this temperature is much more common in low situations than elevated ones in the same vicinity. These positions are well sustained by authentic facts, and support the position advocated by one of your correspondents in the last volume of the Farmer, viz: that peaches planted on elevated ground in this part of the State are seldom killed in winter, while those in the same vicinity, placed on low grounds, are frequently destroyed.

The fifth, a selection from N. P. Willis, "How to make a paradise in the country"—a pleasant and well written article in which the writer evinces a taste for the beautiful.

The sixth contains notes on indigenous shrubs, by S. P. Buckley, which will be read with interest by those who have a passion for floriculture.

Seventh, Chinese Wistaria, by the Editor.—The Chinese Wistaria is a hardy twining shrub of great beauty—indeed one of the loveliest of all vines of a shrubby kind, grows rapidly, making shoots from twenty to thirty feet in a season when planted in a rich loam, is perfectly hardy in the latitude of Newburg.

Eighth, Remarks on the diseases of the Sycamore. The disease is supposed to be atmospheric, and its effect upon the health and life of the tree appears to be similar to that of the blight in the pear. The remedy proposed is to head down, or shorten in the month of June the extremities of the lower branches.

Tenth, Reviews.

Eleventh, Domestic Notices. Under this head a native pear is brought to notice, called Richard's Beurre, said to be superior to the Onondaga pear in flavor, but somewhat inferior to it in size.

A——.

Detroit, June 25, 1847.

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* Since this article was penned, the writer has deceased. As a practical horticulturist, he had few if any superiors in the Union.

Detroit Horticultural Society.

This Society's third exhibition of fruits, flowers and vegetables for this season, will take place on Tuesday, 24th August.

Although its location is at this point, it is not exclusively a Detroit society—far from it; we expect every town throughout the State will derive some benefit from its operations.

There is much natural fruit about the country that is worth cultivating, and yet without, but worthy of a name.

There is also much engrafted fruit in the State, cultivated under wrong names.

One great object of the Society is to give a correct nomenclature to fruits raised in Michigan. That this object may be accomplished as far as possible, we invite all cultivators within the bounds of this State to forward for exhibition, specimens of either fruits, flowers or vegetables; or whatever they may have, which they deem of interest to either the horticultural or agricultural community.

Persons sending fruits, will please send the correct name with each variety, as far as practicable. Those sending fruits to be named will please give all the information in their possession with regard to their origin.

Our final exhibition for this season will take place in September. The time and place will be given in a future paper.

Articles from the interior designed for exhibition, may be forwarded to John C. Holmes, No. 108, Jefferson Avenue. Please forward articles for exhibition in season to place them upon the tables early on the morning of exhibition.

J. C. Holmes,
President of Detroit Hort. Soc.

Detroit, July 26, 1847.

The Peach Borer.

Mr. Hurlbut:—Agreeably to your request, I give you my experience and theory of the plan which I have adopted in destroying the most potent enemy of the peach, the *borer* or *grub*.—Having lost several valuable trees, and tried various remedies in vain, the thought struck me that pulverized charcoal at the root might be of service. Accordingly I procured at a forge a cart load of refuse cinders, ashes and coal, and had it placed around the roots of my trees, about a half bushel to each, taking care, first to dig about them so as to expose the root some eight or ten inches from the body of the tree, and deep enough to allow the coal to surround the exposed portion of the roots. The result has been that not a *single tree* thus treated has been molested, while that two or three trees, standing in the same rows, among peas which prevented me from digging around them, were nearly destroyed. This experiment was made in June, 1846. I examined the trees carefully as often as once a month during the summer of that year, without finding a single grub, although there were many in the trees when the charcoal was placed around them. This spring, 1847, I procured another load, and have placed it around them in the same manner, and with complete success. So much for the *facts*. Now for the *reason*, which may or may not be correct. It is well known that charcoal, or carbon, taken into the stomach of an animal is wholly inert and harmless, but that carbonic acid gas taken into the lungs is certain death. It is my opinion that there is more or less of this gas constantly emitted during the warm season, which renders it impossible for any insect to live in it. No injury can possibly be done to the tree by its use. It is one of the greatest fertilizers with which I am acquainted.

Washington A. Bacon.

Detroit, July 24, 1847.

Converting Peat to Cow Dung.

Dr. Dana, it is well known, discovered that peat may be changed to the same ingredients as cow dung. The latter is nothing but vegetable matter pulverized by the cattle's teeth, and containing certain salts with which it is combined in its passage through the animal. Peat is also vegetable matter, containing certain acids and other ingredients which prevent its decomposition or rotting. By neutralizing these it becomes similar in its composition to cow dung.

To effect this, he advises to mix 30 lbs. of potash or 20 lbs. of soda ash, or, what is more economical and equally as good, eight bushels of unleached wood ashes to every cord of peat as it is dug. Leached ashes will also answer, but they must be added in proportion of one part to three of peat.

Four cords of peat, he observes, contain as much fertilizing matter as the manure of a cow during the year. Mr. Phinney ascertained, by his experiments that when one part of green animal manure is added to two of peat, it makes the whole equal to unmixed cow manure, thus increasing it two-thirds.

All peats and muck, as we before observed, contain something while in their beds that prevents its rotting; take this away and it readily decomposes and becomes capable of being dissolved and entering into the sap of plants to nourish them. This is usually some acid or astringent matter, or both. The alkalies, such as soda or potash, neutralize it and render it decomposable.

Strawberries in the Cincinnati Market.—The quantity of strawberries sold daily in the markets of the Queen city exceeds all precedent. A committee appointed for that purpose by the Horticultural Society have ascertained the amount brought to market each day, and will make a report at the close of the season. The three best days are put down at 489, 514, 411 bushels!—*Ohio Cultivator.*

Hints for the Season.

Selection of seed wheat.—That the selection of the plumpest and heaviest kernels for seed will be most likely to secure a crop of like qualities, may be considered an axiom in husbandry. Greatly improved varieties of grain have often been originated by careful selection of seed, joined with good cultivation, for several successive years. Instance Gen. Harmon's Improved White Flint wheat, and the Baden and Dutton corn.—On the other hand, an improved variety will degenerate from neglect of the principles on which the improvement was founded, and hence the bad odor into which certain varieties of grain have fallen with some, while with others they have fully sustained their high reputation.

It is not asserted that a handsome crop is not sometimes produced from shrunken, indifferent seed, when the soil, season and cultivation are favorable. But we think we are fully warranted by experience in saying that the success in such cases is not in consequence of using such seed, or because it is just as good as any, but in spite of it:—and that, other circumstances being equally favorable, a more abundant and better crop would have followed the use of seed of an opposite character. In truth, the general law, that "like produces like," prevails throughout all organized nature,—in the vegetable as well as in the animal kingdom,—and the breeder of vegetables has just as much reason to regard it as the breeder of animals. In some parts of Europe, so important is this point deemed to be, that the longest and best heads of wheat are picked out for seed by hand. There are other cheaper processes which answer very well, such as passing through a fanning mill turning so as to throw over all light kernels and chess, striking sheaves over a barrel until the heaviest kernels have fallen out, &c.

In connection with the selection of seed, may be mentioned the avoidance of the intermixture of varieties, as affecting the merchantable value of the staple. A mixed sample always shows to bad advantage, and purchasers will give less for such, than for the same wheat if the sorts are kept distinct. It is needless to say that the same reason applies with increased force to the presence of rye, chess, and other impurities.

Preparation of the seed.—Of the various applications made to seed wheat, to increase the growth of the crop, or prevent the diseases to which it is liable, we believe none has met with such general approval, as that of brining and liming. The manner of doing this described in our last number, may be an improvement on the method commonly practiced, and is probably worth a trial.

Sowing wheat.—The Hessian fly having been found very numerous and destructive the present season, we would invite especial attention to the remedies described in the first three numbers of the present volume, and particularly to that of using wheat as a decoy. There will probably in no case be any loss by the practice recommended, as the increased product on the strips used for decoy, from the additional plowing and the dressing afforded to the soil by the wheat plowed under, will be likely to repay the cost. Whether this remedy is made use of or not, those who have studied the habits of the insect cannot fail to infer that it is policy, in badly infested districts, to defer sowing (unless for the purpose of a decoy) until about the 20th or 25th of September.

Weeds.—It is economy, at whatever cost, to prevent the seeds of weeds from ripening.

Keeping Fowls to Profit.—The Ploughman contains an extract of a letter from a gentleman, who owns and cultivates a farm in Lancaster, which says: "I have wintered 12 hens the past winter; from January first, to March fifteenth, they laid 18 dozen of eggs. A brother in Cambridge, wintered 6 hens, and in the same time had not one egg from them. Now for the reasan of the difference. I applied to a brother who lives in Worcester, and who is curious about such matters, to procure for me some Dorking Fowls, having heard that they were famous for laying. My brother informed me they were not what they were "cracked up to be," and advised me not to keep them—but said, buy pullets any where, and of any kind, give them a comfortable place to roost in, a plenty and variety of suitable food; *never winter* a fowl the second time; change the rooster every year, and you will not fail having productive hens, and that is the whole *secret* of the business.

I sold my eggs for 20 cents a dozen, except the last 2½ dozen, and the proceeds repays all the expense of the fowls for one year. The *skunks* made such havoc among the chickens that we raised but very few. We had, however, 1½ dozen fowls to kill during the fall, and about 40 dozen of eggs to eat during the past year. So you see that fowls may be managed so as to be profitable.

Comparative weight of Pork and Bacon.

In the American Agriculturist for June, Solon Robinson gives tables made up from his own experiments, showing the comparative profit of converting pork into smoked meat, and of selling in the whole hog. The estimates appear to be carefully made, and will serve to point out satisfactorily the most profitable disposition of this part of the farmer's produce.

On the 16th of Dec., 1846, I bought twelve hogs, weighing 272, 245, 240, 237, 230, 229, 223, 212, 212, 206, 198, 189, making a total of 2,693 lbs. at $1 87½ per cwt., making $50 50.

According to the market price in Chicago this was the fair value, merely deducting the price of hauling. These cut up next day made

24 handsomely trimmed hams, weighing 632 lbs., to cost say 2¼ cents,	$14 22
24 handsomely trimmed shoulders, weighing 580 lbs., to cost say 2 cents,	11 60
24 handsomely trimmed sides, clear of bone, weighing 668 lbs., to cost 2½ cts.	16 65
Leaf, lard, and trimmings of belly, &c., weighing 330 lbs., to cost say 3 cts.	9 90
Trimmings of lean meat, clear of bone, for sausage, weighing 51 lbs., it will make	$52 37

Or $1 87 more than the whole hogs cost, or 2,261 lbs., including the sausage meat at 2¼ cts. a pound, it will exceed the cost 37 cents.

Then I had the remainder as follows :

12 joles	106
Back bones and ribs	158
Pates and souse	125
Loss in cutting up	43
	2693

I take no account now of anything but the hams, shoulders, and sides. For cutting and curing I have charged my own time.

1 day cutting up & salting (including board)	$1,25
1 day hired man assisting	62
2 lbs. saltpetre, 37 ; 96 lbs. N. Y. salt (1¼ bushels) 96 cts.	1,33
Dec. 30, work overhauling and resalting, 25 cts. ; 32 lbs. salt, 32 cts.	57
Jan. 16, 1847, preparing and hanging up meat to smoke	1,25
April 2, labor of weighing bacon	25
	$5,27

After smoking and drying from Jan. 16, to April 2, it weighed as follows :

24 hams	571,	loss 61,	632	original weight.
24 shoulders	534,	do 46,	580	do
24 sides	636,	do 32,	668	do
	1741	139	1880	

This, at three cents a pound, will exceed the cost of the hogs, $1,73.

Any person can, however, fix his own price upon each part, and by taking comparative weights make his own calculation and estimate of profit and loss. The weights were all carefully taken by my own hands, with the same steelyards.—The hogs were well fatted upon corn. The price of pork last fall was low. The fair price of the bacon now, I think, is seven cents on an average.

But as "one swallow don't make a summer," I will give another table, so that a comparison can be made with these and the former one [See Sept. No. for 1846.] Jan. 13, 1847, I killed seven hogs, weighing 331, 235, 233, 222, 173, 167, 150, (the three last pigs,) and at the same time received from a tenant the half of two others, that were poorly fatted, which weighed 237 and 186, making my half 212, and the total 1723 lbs., which at the same price as the other lot, $1,87½ per cwt., would make $32,30. These cut up the next day, were as follows :—

16 hams	413
16 shoulders	334
16 sides	400
Leaf lard, and trimmings	262
Sausage meat and tail pieces	63
	1472
Joles	78
Back bones and ribs	80
Pates and souse	80
Loss in cutting	13
	1723

The per centage of loss in cutting up this lot is less than the other. This is partly owing to being better dressed.

Weight smoked	370	loss 43		413
do do	314	do 20		334
do do	368	do 32		400
	1052	95		1147

This at three cents falls a little short of the price fixed as cost, while the other lot at the same rate exceeded it. This is owing to the small hogs in this lot. The charges against this lot are for

75 lbs. of salt	75
¾ do saltpetre	14
Cutting up and salting	1,00
Overhauling and weighing	36
	$2,25

No matter what the price of fresh pork is, if the farmer is sure that he could sell the bacon for double that price, he will find it profitable to salt instead of selling in the hog. For the lard, sausage-meat, joles, ribs, &c., will more than pay the cost and trouble of curing, and then he will save about 40 per cent. in the weight of hauling to market.

I should like to see similar calculations upon putting up pork in barrels.

The Aphis, or Plant Louse.

A quick, cheap and efficient method of destroying the aphis upon the leaves of large trees, is by fumigating with tobacco. Take a dish of coals and throw upon it some tobacco stalks, well moistened that they may not blaze; place it at the windward side of the tree and as near the branches as possible, that the insects upon the under side of the leaves may receive the full benefit of the smoke. In a few minutes the tree will be well cleared of this troublesome insect.

J. C. H.

Detroit, July 20, 1847.

How to preserve Girdled Trees.—Mr. Pliny H. Babbitt, of this town, showed us a few days since, an apple tree in his orchard which two years ago last winter, was completely girdled by mice, for the space of about ten inches around the trunk, which was a little less than a foot in diameter. Soon after the snow was gone, Mr. B. took several thrifty sprouts from the tree of sufficient length to span the girdled part, and champering off the ends inserted one in the bark below the girdle and the other above with wax, left them. One of these sprouts lived, and the tree bore as usual the ensuing summer. This year the tree is again in full blossom, drawing its entire sustenance through this sprout, which has grown to about ¾ of an inch in diameter. The tree has a heavy top, and the girdled part, or about one foot of its trunk, close to the ground, is entirely dead.—*Barre Patriot.*

Cultivation of Cranberries on upland soils.—The attention of the public having been called to the culture of this delicious fruit, and Mr. Gardner, of Massachusetts, having produced three hundred and twenty bushels to the acre on upland soil, I proceed to give his mode of cultivation, as follows: "I select a piece of cold wet land that will keep moist through the year; remove the top soil to the depth of two inches; this prevents all grass or weeds from growing, and the plants will require no cultivation after they are set out. After the top was removed, I harrowed the ground smooth and marked it out in drills, eighteen inches apart, and set in the plants four inches apart. Some I set out on sods fourteen inches square, placed in holes a little below the surface. They all flourished far beyond my expectations: the first year they put forth runners three feet long, and every vine was loaded with fruit. The plants can be set out from September to December, and from April to the last of June."—*Far. Cabinet.*

B. G. Boswell.

Comparative value of Manures.—The value of manures is determined in a great measure by the food upon which the animal is kept. That of swine is considered among the best, because their food consists of grain or other highly azotized substances. The same is true of that of hens.

The manure of cattle and horses differs several hundred per cent, according to their food—the better the food, the better the manure.

The manure of old animals is better than that of young ones—less of its nutriment being taken up to supply the wants of the system, and more being left to pass off. A knowledge of these facts may often enable the farmer to economise in the disposal of his manures.—*Ex.*

Rich Artificial Manure.—Samuel Davidson, of Greece, N. Y., obtained one hundred and twenty-two bushels of corn per acre on land to which three bushels of the following manure was applied:—One barrel of human urine, to which was added six pounds of dissolved sulphate of magnesia (epsom salts,) was mixed with enough gypsum to moisten the whole. On another acre which had three bushels of dry plaster, there were ninety bushels. What part of the difference in the crops of these two acres, the mixture produced, would be interesting to know.—*Albany Cultivator.*

Cure for Bots.—To make the grub or bot let go his hold, give the horse a quart of molasses or dissolved sugar, with a quart of sweet milk; in 30 minutes you will find the horse at ease; then pulverize one-eighth of a pound of alum, dissolve it in a quart of warm water, and drench your horse; after which, in two hours or less, give the horse one pound of salts, and you will find the bots in his dung. I have never failed. I think this is, after all the speculations and cures I have seen, the only thing that will, to a certainty, remove the bots. The molasses and sweet milk causes the bot to let go, and prey upon the sweetening—the alum contracts him, and the salts passes him off.—*J. C. Walker, in Spirit of the Times.*

Method of supporting Trees.—The branches of trees when loaded with fruit, may be kept from breaking, in the following manner:—Connect with cords all the heaviest branches, commencing with the lower ones, and fasten the ends to the upper part of the trunk. Branches when thus secured together cannot break. This plan is far superior to the old method of props.

To destroy Mildew.—Mr. Hagerston, who obtained, a few years ago, a premium from the Massachusetts Horticultural Society, for the discovery of a mode of destroying the rose-slug says, that a weak solution of whale-oil soap, in the proportion of two pounds of soap to about fifteen gallons of water, will check and entirely destroy the mildew on the gooseberry, peach, grape vine, &c.—*Am. Agriculturist.*

Cheap Paint for Barns.—An excellent and cheap paint for rough wood-work is made of six pounds of melted pitch, one pint of linseed oil, and one pound of yellow ochre.

EDITOR'S NOTE BOOK.

Seeding with timothy in the fall.—To the question of "Enquirer" in our last, whether timothy sown in the fall does as well as when sown in the spring, we reply that we never heard of any objection to fall seeding so far as the grass crop is concerned. It is not much subject to winter killing, and is prepared for an earlier and more vigorous growth in the spring from having taken root the season before. The practice of many good farmers favors fall seeding. R. L. Pell Esq. in the Commissioner of Patents' Report for 1843, says:—"When preparing a meadow on upland, I usually seed on wheat, sowing in the fall half a bushel of timothy seed to the acre."—Judge Buel, in his Farmer's Companion, says:—"The seed may be sown in autumn with winter grain, in the spring with a crop, or at midsummer with buckwheat. The seed being small, particular care is requisite in pulverizing the ground for its reception, and when practicable, the roller should follow the seeding process."—The common practice is to sow the seed between the first and second harrowing of the wheat. Instead of that, it is recommended as preferable to sow after the last harrowing, merely following with the roller to press in the seed. Some think it better to trust to the seed being washed in by the rains than to harrow it in, as experiment has shown that much of the seed will not grow, if buried only two or three inches below the surface.

Bloody Murrain.—"An Inquirer" would like to know if there is any preventive of the bloody murrain, or cure after it takes hold. We at present know of no better preventives or cures than are described in several articles in our last volume, which will be found by referring to the index, under the heads, "Bloody murrain" and Murrain."

Orchard Grass Seed.—"An Inquirer" asks, "can Orchard grass seed be bought in Detroit by the bushel, and at what price." It cannot be bought here, nor, we presume, at any place short of some of the Eastern seed stores. In the absence of any agricultural warehouse in Michigan, we will here offer to procure for any subscriber, such seeds or implements as are not to be had in our State, and can be had at Eastern establishments, and we will do this entirely free of charge, the article costing the purchaser only the original price, with transportation and postage added.—Our motive is simply the wish to see modern improvements introduced among us.

Keeping hens.—It is more economical, and infinitely less annoying, to keep hens the year round in an enclosure, than to have them rambling about. An exception in favor of larger liberty may be occasionally made, when we wish to avail ourselves of their insectivorous propensities. But an enclosure there should be for them, at all events, of good size, and furnished with accommodations for laying, setting, &c. in which they may be shut up when their services are not needed elsewhere.

Cure for plant lice.—The Jamaica, L. I. Farmer says: "The Rev. Wm. L. Johnson. of our village, had a fine apple tree of choice kind, which leaved and bloomed this spring, but the prospect of fruit was rendered doubtful by the thousands of insects, called aphides, which attached themselves to the leaves. A hole about one quarter inch diameter was bored into the bottom of the tree, and a piece of roll brimstone inserted. In twenty four hours the insects were seen leaving the tree in swarms." This method may be very effectual; but we think one of our correspondents in this number mentions a better one.

Wool.—The excellence of wool consists in a great degree in the evenness and regularity of the curves of the fibre. If the curves be uneven, the manufacturers cannot work it up so well.

Steam in farming operations.—The leading article of the London Agricultural Gazette, May 8, is on the employment of steam in farming, considering it a more docile and less costly power than either man or horse. Every 100 acres of ploughing involves the passing over 1000 linear miles by 500 consumers of food. They calculate the saving by steam *on every ploughing* at $1 per acre, or $100,000,000 on as many acres. —*Mass. Spy.*

Specimens of Maple Sugar.—"A subscriber from Lapeer Co." has sent three samples of maple sugar made by him in 1845, '46 and '47.—The samples are quite similar and very beautiful, approximating the whiteness of loaf, and comparing not unfavorably, we think, with some of the best specimens exhibited at the N. Y. State Fair. We shall take pleasure in presenting them at the next exhibition of the Detroit Horticultural Society.

The process of manufacture is described in a communication published in the Farmer, Vol. III, by which it would appear that the whole secret of the writer's success lies in the use of care and perfect cleanliness in every part of the operation. We understand that he uses no cleansing application whatever. His directions are:—

"Make all dishes, pans and kettles used, clean; boil your sap before it sours; never let sap, after being heated, cool in an iron vessel; once in 12 hours syrup off, and put your syrup, (the hotter the better,) into a tub smallest at the bottom; let it stand 48 hours; drain off and strain when cold through flannel. Never use a kettle without washing, as some do; they say it is wasteful to wash after taking out the syrup, and will commence boiling with the syrup sticking on the kettle, and in that way color their sugar in the first start. The old proverb I believe to hold good in sugar making, "An ounce of prevention is worth a pound of cure." Begin with clean dishes, and keep them clean, catch your sap clean, and keep it clean. This done, you will have clean sugar."

For the Michigan Farmer.

Clean Culture.

There is nothing, save a supply of food and nourishment, of as much importance to the growth, and maturity of the farmer's crops, and consequently to the gratification of his own desires, as clean cultivation. So obvious is this, that it seems as if every farmer must see it. But such is the foolish desire of a great many who call themselves farmers, to cultivate or go over a great extent of ground, that their hoed crops rarely if ever receive more than a single dressing. Their wheat or grass is ready for the scythe, and, "we have got so much work to do that must be done, that I don't see how we can hoe these crops again:" and thus they are not seen again, until they are to be harvested, and then, it is difficult to tell, whether they have ever been visited by a farm implement or not.

Now this is a very inconsiderate, and ruinous way of managing. Those who "farm it" in this way, never have calculated the enormous cost of raising weeds, and grass among cultivated crops. They extract from the soil, the essential nourishment of plants, thereby depriving them of the power of extending their roots in search for food. They draw the moisture from the soil, so that, in periods of drouth, though there may be an abundance of food, the crop derives no benefit from it, as plants, never take into their organization, through their spongioles, or roots, any nourishment, until it has been dissolved in water. The immediate result is a vast diminution of product, whether of roots, stalks or grain. But this is not all. The next crop, even if it is well cultivated, will be injured by this process. And if this pernicious, and exhausting practice is continued, for years in succession, the ground will become so infested with weeds and grass, the seeds of which will always spring up whenever it is moved, that the sickly crop will not pay the expense of even the slight cultivation they receive, and the termination is vastly worse than the commencement. Chas. Betts.

Redford, July 1847.

FARM FOR SALE,

Consisting of 200 acres, situate in the town of Highland, Oakland Co. 1½ miles from the White Lake Settlement. The land is oak openings, sufficiently timbered, the soil a sandy loam, with a sufficient mixture of clay to adapt it for wheat and grass. Roads run on the North and West sides. Ten acres have been under cultivation several years. The land belongs to a non-resident, and will be sold cheap, and on favorable terms of payment. Apply (post-paid) to the Editor of the Farmer, or (in person) to Samuel Burgess, who lives opposite the premises.

July 24th, 1847.

Market Intelligence.

Detroit, July 29.

No transactions in flour are taking place of sufficient importance to establish a quotation. Limited sales have occurred within the week past at $3,75 @ $4,25—but these are mostly in the retail trade. For the guidance of the farmer we could not safely quote above $3,50. News of the harvest in Europe will soon be looked for with much interest as deciding the extent of foreign demand.

Corn, in small lots is taken at 28 @ 32c; Oats, 25 @ 28c; Butter, roll, 9 @ 10c; cheese, new, 6 @ 7c.

New York, July 27.

Good sound flour in demand at $5,50; for straight Michigan and Ohio, $5,56; for irregular lots, 5,25 @ 5,44. Demand mainly for home use; shippers only offer 5,50 for Genesee, and 5,37 for straight Michigan and Ohio. Wheat 1,28.

CONTENTS OF THIS NUMBER.

In the country;..... 65
Cultivation of the soil for fruit trees;..... 66
In and in breeding;..... 67
"Wonting" cattle;..... 70
Production and preparation of corn for the European market; Salt for live trees and hedges;..... 71
Harrison's cultivators; Importance of deep tillage; Work for gardeners;..... 72
Kephart's Fruit Preserver;..... 73
Horticulturist for June;..... 74
Detroit Horticultural Society; Peach borer; Converting peat to cow dung;..... 75
Hints for the season;..... 76
Comparative weight of pork and bacon;..... 77
Aphis or plant louse; How to preserve girdled trees; Cranberries on upland; Comparative value of manures; Cure for bots; Method of supporting trees; To destroy mildew; Cheap paint for barns;..... 78
Editor's Note Book;..... 79
Advertisements, &c..... 80

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